

AMENDMENTS TO THE CLAIMS

1. (Currently amended) A shutter opening/closing mechanism for a disc cartridge comprising a disc-shaped recording medium, an inner rotor, a shutter and a housing in which an aperture is formed, said aperture opened or closed by said shutter by rotation of said inner rotor, said shutter opening/closing mechanism comprising:

a base relatively movable along one lateral surface of said housing;

a first engagement member provided to one end of said base for engaging with a first mating engagement section provided to an outer rim of said inner rotor facing outwards from a lateral side of said housing when said shutter is closed;

a second engagement member provided to an other end of said base for engaging with a second mating engagement section provided to the outer rim of said inner rotor facing outwards from a lateral side of said housing when said shutter is opened; ~~and~~

said first engagement member and said second engagement member being mounted to said base so that both engagement members are movable both linearly, perpendicular to a surface of said housing, and angularly, coincident with said surface of said housing;

a rack member mounted between said first engagement member and said second engagement member of said base for meshing with a gear provided in a preset area of the outer rim of said inner rotor between said first mating engagement section and said second mating engagement section; and

a first torsion coil spring and a second torsion coil spring each having one end of the coiled part of the wire retained by said base and an other end resiliently movable in a direction perpendicular to the surface and in contact with one of the first or second engagement members in a manner to allow the engagement members to move both linearly and angularly.

~~said first engagement member and said second engagement member being mounted to said base so that distal ends thereof are movable in a direction perpendicular to a direction along one lateral surface of said housing and pivotable along said one lateral surface of said housing.~~

2. (Previously Presented) The shutter opening/closing mechanism according to claim 1 further comprising:

~~— a first torsion coil spring and a second torsion coil spring each having a coiled part of a wire retained by said base, with one end of the coiled part of the wire retained by said base and an other end resiliently movable in a direction perpendicular to a direction along one lateral surface of said housing;~~

said first engagement member and said second engagement member being retained by holders provided to said base with distal ends of the first engagement member and the second engagement member protruded from said holders towards one lateral surface of said housing ~~and with proximal ends thereof biased by opposite ends of said first torsion coil spring and said second torsion coil spring.~~

3. (Original) The shutter opening/closing mechanism according to claim 1 wherein said rack member is mounted to said base so that said rack member is moved in a direction perpendicular to a direction along said lateral surface of said housing.

4. (Previously Presented) The shutter opening/closing mechanism according to claim 3 further comprising:

biasing means for biasing said rack member towards said lateral surface of said housing;

and wherein said rack member is retained by a holder provided to said base and biased by said biasing means for protruding from said holder towards a lateral surface of said casing.

5. (Original) The shutter opening/closing mechanism according to claim 4 wherein said biasing means includes a compression coil spring arranged between said rack member and the holder of said base.

6. (Currently amended) A disc driving apparatus for use with a disc cartridge comprising: a disc-shaped recording medium, an inner rotor, a shutter and a housing in which an

aperture is formed, said aperture opened or closed by said shutter by rotation of said inner rotor, said disc driving apparatus comprising:

a loading mechanism for causing movement of said disc cartridge between a pull-out position in which the disc cartridge is pulled out to outside a main body unit of the apparatus and a housed position in which the disc cartridge is housed within said main body unit of the apparatus; and

a shutter opening/closing mechanism for opening/closing said shutter by rotating said inner rotor of said disc cartridge moved by said loading mechanism between said pull-out position and said housed position to effect opening/ closure of said shutter;

said shutter opening/closing mechanism including a base relatively movable along one lateral surface of said housing; a first engagement member provided to one end of said base for engaging with a first mating engagement section provided to an outer rim of said inner rotor facing outwards from a lateral side of said housing when said shutter is closed; a second engagement member provided to an other end of said base for engaging with a second mating engagement section provided to the outer rim of said inner rotor facing outwards from a lateral side of said housing when said shutter is opened; and

said first engagement member and said second engagement member being mounted to said base so that both engagement members are movable both linearly, perpendicular to a surface of said housing, and angularly, coincident with said surface of said housing;

a rack member mounted between said first engagement member and said second engagement member of said base for meshing with a gear provided in a preset area of the outer rim of said inner rotor between said first mating engagement section and said second mating engagement section; and a first torsion coil spring and a second torsion coil spring each having one end of the coiled part of the wire retained by said base and an other end resiliently movable in a direction perpendicular to the surface and in contact with one of the first or second engagement members in a manner to allow the engagement members to move both linearly and angularly.

~~said first engagement member and said second engagement member being mounted to said base so that distal ends thereof are movable in a direction perpendicular to a direction along one lateral surface of said housing and pivotable along said one lateral surface of said housing.~~

7. (Previously Presented) The disc driving apparatus according to claim 6 wherein said shutter opening/closing mechanism further comprises:

~~—— a first torsion coil spring and a second torsion coil spring each having a coiled part of a wire retained by said base, with one end of the coiled part of the wire retained by said base and the other end resiliently movable in a direction perpendicular to a direction along one lateral surface of said housing;~~

said first engagement member and said second engagement member being retained by holders provided to said base with distal ends of the first engagement member and the second engagement member protruded from said holders towards one lateral surface of said housing and with proximal ends thereof biased by opposite ends of said first torsion coil spring and said second torsion coil spring.

8. (Original) The disc driving mechanism according to claim 6 wherein said rack member is mounted to said base so that said rack member is moved in a direction perpendicular to a direction along said lateral surface of said housing.

9. (Previously Presented) The disc driving mechanism according to claim 8 wherein the shutter opening/closing mechanism further comprises:

biasing means for biasing said rack member towards said lateral surface of said housing;
and wherein said rack member is retained by a holder provided to said base and biased by said biasing means for protruding from said holder towards a lateral surface of said casing.

10. (Original) The disc driving mechanism according to claim 9 wherein said biasing means includes a compression coil spring arranged between said rack member and the holder of said base.